



## Santa Clara Law Review

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Volume 44 | Number 3

Article 5

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1-1-2004

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### Recommended Citation

John P. Sande IV, Comment, *A River Runs to It: Can the Public Trust Doctrine Save Walker Lake?*, 44 SANTA CLARA L. REV. 831 (2004).  
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# A RIVER RUNS TO IT: CAN THE PUBLIC TRUST DOCTRINE SAVE WALKER LAKE?

John P. Sande, IV\*

## I. INTRODUCTION

While traveling through Nevada, Mark Twain observed many curious waterways. He noted,

There are several rivers in Nevada, and they all have this mysterious fate. They end in various lakes or "sinks," and that is the last of them. Carson Lake, Humboldt Lake, Walker Lake, Mono Lake, are all great sheets of water without any visible outlet. Water is always flowing into them; none is ever seen to flow out of them, and yet they remain always level full, neither receding nor overflowing. What they do with their surplus is only known to the Creator.<sup>1</sup>

Unfortunately, Twain's observations are no longer true. The same lakes Twain described in the late 1860s have seen a significant drop in level as a result of the arid climate of eastern California and western Nevada<sup>2</sup> and upstream appropriations from tributary streams and rivers.<sup>3</sup>

Prior to 1983, California state law allowed for the diver-

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1. MARK TWAIN, INNOCENTS ABROAD, ROUGHING IT 635 (Guy Cardwell ed., Library of America, 1984) (1869). The quoted material appears in *Roughing It*, a companion volume to Twain's earlier travel narrative, *Innocents Abroad*.

2. The average rainfall for the Walker River basin is eight inches per year. See CAL. DEPT OF WATER RESOURCES, WALKER RIVER ATLAS, 38 (1992). In comparison, the Mojave Desert receives an average of 3.6 inches of precipitation per year, and the Folsom Dam near Sacramento receives approximately 22.5 inches of rainfall per year. <http://www.worldclimate.com>.

3. For example, the water surface elevation of Walker Lake declined 126 feet between 1882 and 1992, from 4083 to 3957 feet; in some parts of the lake the shoreline has receded by as much as seven miles. See CAL. DEPT OF WATER RESOURCES, *supra* note 2, at 19, 32.

sion of water from a river or lake so long as the diverting party obtained a water right and put the water to beneficial use.<sup>4</sup> Although these rights to use were not absolute, little protection was afforded to the waterways and the ecosystems the waterways supported.<sup>5</sup> However, in 1983 the California Supreme Court handed down a landmark decision that served to protect Mono Lake and other navigable waterways from appropriators seeking to transport water.<sup>6</sup> In *National Audubon Society v. Superior Court*,<sup>7</sup> the court addressed the previously unexplained question of how the California system of water distribution, namely prior appropriation<sup>8</sup> and the public trust doctrine coexisted.<sup>9</sup> The court determined that the public trust doctrine requires state courts and agencies to consider the effect that water diversions by individual water right holders would have upon the recreational and environmental interest of the public.<sup>10</sup>

Following California's lead, many other states have addressed the public trust doctrine and its function in their respective legal systems.<sup>11</sup> Nevada had an opportunity to address the existence and role of the public trust doctrine in 2001, but the Nevada Supreme Court declined to review the case and deferred judgment to the federal decree court.<sup>12</sup>

Recent factors, such as Nevada's increasing population and an impending drought, have placed increasing pressures on Nevada's waterways, creating a pressing need for certainty in Nevada's water law.<sup>13</sup> This comment examines the tenets

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4. California state law is a mixed system of riparian rights and prior appropriation. These water doctrines will be discussed in greater detail below.

5. See *infra* notes 133-48 and accompanying text.

6. See *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal. 1983).

7. *Id.*

8. California recognizes both riparian and prior appropriation doctrines in its water law, but this comment will focus only on the tenets of prior appropriation.

9. *Nat'l Audubon Soc'y*, 658 P.2d at 712.

10. *Id.*

11. See *Idaho Conservation League v. State*, 911 P.2d 949 (Idaho 1995) (however, the Idaho legislature later renounced the public trust doctrine); *Dep't of State Lands v. Pettibone*, 702 P.2d 948 (Mont. 1985); *United Plainsmen Ass'n v. N.D. State Water Conservation Comm'n*, 247 N.W.2d 457 (N.D. 1976).

12. See *Mineral County v. State*, Dep't of Conservation and Natural Res., 20 P.3d 800 (Nev. 2001).

13. In 2001 Nevada was the fastest growing state in the United States, and in July 2001 it surpassed a population of 2.1 million. <http://eire.census.gov/popest/data/states/tables/NST-EST2003-01.php>.

of the public trust doctrine as expressed in *National Audubon* and applies them to the present situation at Walker Lake.<sup>14</sup> Part II provides background of Walker Lake and its environment. Part III outlines the system of prior appropriation and its genesis into Nevada water law. Part IV then illustrates the problems of incorporating the public trust doctrine into the appropriative system of water allocation, and delineates strengths and weaknesses of the appropriative system. Finally, Part IV discusses the public trust doctrine, how the doctrine has evolved into the law of many of the arid western states, and how it could function to protect Walker Lake (assuming the Nevada Supreme Court adopts a similar rationale as California).<sup>15</sup> Part V offers a solution for protecting Walker Lake without relying on the public trust doctrine. Finally, the comment concludes with an explanation of why the public trust doctrine is unable to protect Walker Lake adequately.

## II. BACKGROUND—THE ECOSYSTEM AND THE LAW

### A. Walker Lake and Its Ecosystem

Walker Lake is a terminal lake<sup>16</sup> situated in a desert valley located in Mineral County, Nevada three and one-half miles north of Hawthorne.<sup>17</sup> The lake is a remnant of a much greater prehistoric lake, Lake Lahontan, which once covered much of northwestern Nevada.<sup>18</sup>

The lake's only source of fresh water recharge, other than precipitation, comes from the Walker River.<sup>19</sup> The Walker

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14. Obviously two different lakes in two different watersheds possess unique problems and solutions. However, given the proximity of the lakes and other natural characteristics, the comparison is reasonable.

15. Nevada remains the only western state that has not addressed the public trust doctrine. However, not all western states have incorporated the public trust doctrine. See 2 WATERS AND WATER RIGHTS § 12 (Robert E. Beck et al. eds., 1991).

16. A terminal lake is a lake with no surface outlets. *Mineral County*, 20 P.3d at 802.

17. See CAL. DEP'T OF WATER RESOURCES, *supra* note 2, at 32.

18. *Id.* Lake Lahontan was an immense lake estimated to have covered over 8000 square miles of northwestern Nevada, and is believed to have had a maximum depth of about 530 feet. As the climate changed, the lake receded, carving its recession into the mountainsides. All that remains of the ancient lake is a number of terminal lakes and sinks, such as Pyramid Lake, the Carson Playa, Mono Lake, and Walker Lake. See CAL. DEP'T OF WATER RESOURCES, *supra* note 2, at 19.

19. Walker Lake also receives recharge from groundwater, but this com-

River begins in the upper elevations of the eastern Sierra Nevada Mountains in California, and meanders a distance of approximately 150 miles through small lakes and reservoirs until it ends at Walker Lake.<sup>20</sup> By California's standards, the river would hardly be considered more than a stream.<sup>21</sup> However, it provides opportunities for irrigation and possesses tremendous scenic beauty as it travels through the mountainous slopes of California into the picturesque deserts of Nevada.<sup>22</sup>

Today the lake is about five and one-half miles wide and fourteen and one-half miles long, and has a depth of approximately 100 feet and a water volume of about 2.5 million acre-feet.<sup>23</sup> Walker Lake's water can no longer be used for municipal or agricultural use,<sup>24</sup> and is now used as the primary recreational attraction of the lower Walker River watershed.<sup>25</sup> The lake provides anglers the opportunity to seek the Lahontan cutthroat trout in the winter months,<sup>26</sup> and offers boating and water skiing opportunities in the summer.<sup>27</sup> Walker Lake also provides those interested in bird watching an interesting opportunity, as it is an important habitat for a wide variety of migratory birds, including American white pelicans, common loons, snowy plovers, long-billed curlews, double crested cormorants, white-faced ibis, gulls, herons, terns, grebes, avocets, and many others.<sup>28</sup> Aside from recreational activities, the lake supports a diverse and fragile ecosystem including a delicate balance of algae, zooplankton, small crustaceans, insects, and fish.<sup>29</sup>

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ment will only focus on the surface water totals.

20. See generally CAL. DEP'T OF WATER RESOURCES, *supra* note 2, at 5-7.

21. In 1983, Walker River reached its maximum annual water flow; 602,500 acre-feet of water passed through the gauging station at Wabuska. See *id.* at 40.

22. *Id.* at 7-19.

23. *Id.* at 32.

24. See *id.*

25. See *id.*

26. CAL. DEP'T OF WATER RESOURCES, *supra* note 2, at 88. The Lahontan cutthroat trout is a species of trout that ranges from twenty to sixty pounds. Originally this fish could be found in Pyramid Lake, Walker Lake, and Lake Tahoe, but now the trout has been listed as a "threatened" species by the U.S. Fish and Wildlife Service (USFWS), and is only found in Pyramid and Walker Lakes. Endangered Species List, 40 Fed. Reg. 29,864 (1975).

27. CAL. DEP'T OF WATER RESOURCES, *supra* note 2, at 88.

28. *Id.*

29. Mineral County v. State, Dep't of Conservation and Natural Res., 20

Unfortunately, the increase in total dissolved solids (TDS) has threatened the recreational opportunities and ecosystems the lake offers.<sup>30</sup> The increasing sediments, primarily sodium, chloride, and sulfate,<sup>31</sup> may destroy the cutthroat trout fishery and dissuade swimmers from using the lake.<sup>32</sup> The concentration of TDS has risen from 2,560 milligrams per liter (mg/l) in 1882 to nearly 13,000 mg/l in 1996,<sup>33</sup> and will continue to rise as the lake level declines.<sup>34</sup>

By all indications the lake will continue to decline as it has since its first measurements in 1882. Insufficient water from the Walker River and the high rate of evaporation<sup>35</sup> have combined to deplete the water storage of Walker Lake. Walker River's failure to supply enough recharge has resulted from a number of variables. Dry winter months and the number of users seeking to protect their rights in the water contribute to the lack of instream flow from the Walker River.<sup>36</sup> This comment will now briefly examine the upstream diversions that have contributed to the lowering of the lake.

#### *B. Walker River Water Diversions*

Essentially the water flowing in the Walker River has two main uses: agricultural and municipal. Agricultural uses typically encompass water used for growing and maintaining crops and raising livestock, while the municipal uses include everyday drinking and bathing.

Today, a vast majority of the water diverted from the Walker River is used for agricultural purposes.<sup>37</sup> The actual amount of irrigated land is between 110,000 and 120,000 acres, with approximately thirty percent of the irrigated land located in California and seventy percent located in Nevada.<sup>38</sup>

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P.3d 800, 803 (Nev. 2001).

30. See Gary Horton, *Walker River Chronology*, at <http://water.nv.gov/Water%20planning/walker/walker1.htm> (last visited Jan. 19, 2004).

31. The percentage of each mineral contained in the lake is 31%, 24%, and 22%, respectively. See *id.* at n.26.

32. *Id.*

33. *Id.*

34. *Id.*

35. The rate of lake surface evaporation has been measured at approximately 137,000 acre-feet per year (4.1 feet per year). *Id.*

36. See Horton, *supra* note 30, at n.26.

37. See *id.* at 75.

38. See *id.* at 75. These numbers include irrigation from groundwater.

The land serviced by the Walker River Irrigation District (WIRD) is one of the most agriculturally productive areas in Nevada.<sup>39</sup> The district produces more white onions than any other area in the United States, and the total market value of agricultural products in Lyon County has recently exceeded \$50,000,000 per year.<sup>40</sup>

The right to use irrigation water from the Walker River is possessed both by the Paiute Indian Reservation and individual farmers located within the basin. Establishing these rights has been a long and arduous process, as the Walker River and its tributaries have been the object of litigation for nearly one hundred years.<sup>41</sup>

In 1859 Congress created the Walker River Paiute Reservation,<sup>42</sup> which consisted of approximately 320,000 acres and included all of Walker Lake.<sup>43</sup> Paiute Tribe members were originally hunters and gatherers, but based on assurances from the government, they began a cultural transformation to agriculture and ranching.<sup>44</sup> The tribe used water from the Walker River to cultivate the reservation's lands; however, the tribe never had a reason to obtain water rights for the water they were diverting from the Walker River because no state law allowed them to attach a right,<sup>45</sup> and at the time there were no conflicting uses.<sup>46</sup>

Shortly after the creation of the reservation, there was an influx of settlers attempting to acquire land from the federal

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39. In Nevada, agricultural production in Lyon County is second only to Humboldt County. See <http://www.ers.usda.gov/StateFacts/NV.HTM>.

40. The Walker River flows through parts of Lyon County, Nevada. *Id.*

41. *Mineral County v. State*, Dep't of Conservation and Natural Res., 20 P.3d 800, 803 (Nev. 2001).

42. The Tribe's name for itself is Agai Dicutta, which means "Trout Eater," or Numu, which means "the People." *Id.* at 803 n.8.

43. Public Resource Associates, *Water Resources in the Walker River Basin: A Search for Water to Save Walker Lake* 15 (1994).

44. See *United States v. Walker River Irrigation Dist.*, 11 F. Supp. 158, 159 (D. Nev. 1935), *overruled by* *United States v. Walker River Irrigation Dist.*, 104 F.2d 334 (9th Cir. 1939).

45. See JAMES DAVENPORT, *NEVADA WATER LAW* 6 (2003) (explaining that although there was no state law governing water rights, the concept of riparian rights provided that "ownership of land which abuts a water body carrie[d] with it the right to use the water in the water body").

46. Many of the first settlers did not arrive until after the promulgation of the Homestead Acts in 1862, and the population of the entire state of Nevada in 1860 was only 6,857. By 1870, the population had risen to 42,491. See *Walker River Irrigation Dist.*, 104 F.2d at 340.

government through the Homestead Act of 1862<sup>47</sup> and the Desert Lands Act of 1877.<sup>48</sup> Both of these Acts encouraged western settlement by transferring publicly held government lands to private citizens.<sup>49</sup> Once these immigrants settled on the land, they also began to divert water from the Walker River.

Most of the water rights in the Walker River basin are established by federal decree C-125.<sup>50</sup> This decree was initially created through litigation that began after two competing livestock companies brought suit to determine their rights in the water.<sup>51</sup> This dispute ultimately proceeded to the United States Supreme Court in 1910, where the Court held that the United States District Court for the District of Nevada had jurisdiction to declare the respective rights of the water users in both Nevada and California.<sup>52</sup> Accordingly, the federal district court issued a final decree (no. 731) that allocated the water of the Walker River in 1919.<sup>53</sup> This decree established individual rights to the surface water of the Walker River; however, in 1924 the United States brought another suit in the Federal District Court of Nevada on behalf of the Paiute Indian Reservation.<sup>54</sup> The United States was not party to the original suit, and therefore challenged the validity of the original decree because it failed to recognize the reserved rights of the reservation under the Winters Doctrine.<sup>55</sup> The

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47. Homestead Acts, ch. 75, 12 stat. 392 (1862) (amended 1891, 1908).

48. Desert Land Acts, ch. 107, 19 stat. 377 (1877) (amended 1908).

49. See CAL. DEPT OF WATER RESOURCES, *supra* note 2, at 52.

50. See *id.* at 59-61.

51. In 1902, Miller & Lux, a cattle and land company, brought an action in the United States District Court for the District of Nevada to enjoin Thomas Rickey's use of the Walker River. Rickey's property was located in California, and he had planned to divert the upstream waters into a natural reservoir. Fearing that the dry summers would have a substantial impact on his downstream diversions, Miller sought relief in federal court. See *Rickey Land & Cattle Co. v. Miller & Lux*, 218 U.S. 258 (1910). Henry Miller was no stranger to the court system. His cattle company was involved in many legal water disputes in the western states. Most notably, Miller was involved in a seminal case defining California water law. See *Lux v. Haggin*, 10 P. 674 (Cal. 1886); see also JOSEPH L. SAX ET AL., *LEGAL CONTROL OF WATER RESOURCES* 295-97 (3d ed. 2000) [hereinafter *LEGAL RESOURCES*].

52. *Rickey Land & Cattle Co.*, 218 U.S. at 262.

53. *Pacific Livestock Co. v. Rickey*, No. 731, Final Decree (D. Nev. 1919).

54. See *United States v. Walker River Irrigation Dist.*, 11 F. Supp. 158 (D. Nev. 1935), *overruled by* *United States v. Walker River Irrigation Dist.*, 104 F.2d 334 (9th Cir. 1939); see also *Winters v. United States*, 207 U.S. 564 (1908).

55. See *id.*; see also *Winters v. United States*, 207 U.S. 564 (1908).



United States sought to determine the relationship between the surface water rights reserved for the reservation and others on the river.<sup>56</sup> This litigation resulted in the Walker River Decree C-125 of 1936.<sup>57</sup> Although the decree was substantially the same as decree no. 731, the new decree expanded the scope of the original decree and also recognized the rights of the Paiute tribe.<sup>58</sup> The decree granted the tribe a right to divert 26.25 cubic feet per second (cfs) for 180 days of the year,<sup>59</sup> and its rights were given the highest priority date of November 29, 1859.<sup>60</sup>

Aside from water used for irrigation, the Walker River basin also supports some municipalities.<sup>61</sup> Hawthorne and Yerington, in Nevada, and Bridgeport, in California, all require water taken from the Walker River basin.<sup>62</sup> However, these are all small towns, and municipal use requires much less water than the agricultural consumption. For example, in 1990 Bridgeport extracted 243 acre-feet, Yerington extracted 808 acre-feet, and Hawthorne extracted 1,040 acre-feet.<sup>63</sup>

The agricultural and municipal upstream diversions from both states have gradually begun to affect the lake level,<sup>64</sup> and from 1970 to 1995, the amount of storage water in Walker Lake decreased from 3,204,000 acre-feet to 2,109,000 acre-feet. The continued decrease in the water level and the increase of TDS prompted the Mineral County and the Walker Lake Working Group to file an original writ in state court on June 26, 2000.<sup>65</sup> In the writ they complained that the state

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56. *Walker River Irrigation Dist.*, 11 F. Supp at 159-60.

57. *See id.* The United States Court of Appeals for the Ninth Circuit accepted the report of the special master, and the decree was subsequently amended to conform to the ruling of the court. *See Walker River Irrigation Dist.*, 104 F.2d at 339-40.

58. *Id.*

59. *Id.*

60. *Id.*

61. *See* CAL. DEPT OF WATER RESOURCES, *supra* note 2, at 78.

62. Almost all the water obtained for municipal use is mined from groundwater. *See id.* at 78.

63. *Id.* In comparison, a 1969-level study estimated that agricultural uses required approximately 133,000 acre-feet of water per year. *Id.* at 77.

64. *See* DIVISION OF WATER PLANNING, HISTORIC AND ESTIMATED WALKER LAKE END-OF-WATER YEAR WATER ELEVATIONS (1997).

65. The Walker Lake Working Group is a not-for-profit organization that utilizes the Walker Lake for fishing, birding, recreation, and enjoyment of scenic beauty. *See* Mineral County v. State, Dep't of Conservation and Natural

had failed in its duty to protect and maintain Walker Lake for the benefit of the public,<sup>66</sup> and in doing so had violated the public trust doctrine.<sup>67</sup> The original complaint was dismissed because the court found that the federal decree court maintained jurisdiction over the Walker River diversions. However, Justice Rose stated in a concurring opinion that the court should have affirmatively addressed the existence and role of the public trust doctrine in the state of Nevada.<sup>68</sup> This comment will examine the doctrine of prior appropriation and the public trust doctrine as developed through common law and interpreted in California to analyze its applicability to Nevada law.

*C. System of Prior Appropriation: Nevada's Choice for Water Law*

The implementation of prior appropriation for water distribution in Nevada law was not a smooth one. Only two years after Nevada declared its statehood, the Nevada Supreme Court recognized both riparian principles and prior appropriation principles for establishing rights in water.<sup>69</sup> A few years later, in 1872, the Nevada Supreme Court ruled that the English rule of natural flow prevailed in the state,<sup>70</sup> despite the fact that most western states disfavored the rule.<sup>71</sup> When the issue came before the court a second time, the supreme court overruled its previous decision in favor of the appropriative system.<sup>72</sup> Since then the appropriative system has

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Res., 20 P.3d 800, 804 (Nev. 2001).

66. *See id.* at 801.

67. *Id.* at 804.

68. *Id.* at 807 (Rose, J., concurring).

69. *Lobdell v. Simpson*, 2 Nev. 274 (1866).

70. *See Van Sickle v. Haines*, 7 Nev. 249 (1872). The basic concept of natural flow, also known as riparian rights, illustrates that owners of riparian land have a right to use water passing the land. Owners of littoral property have the right to the reasonable use of that water, but may not transport the water beyond the riparian parcel. Most of the eastern states have implemented the riparian system to govern water issues. However, in the more arid western states, the doctrine has proved unworkable. For a comprehensive discussion on the riparian system, see LEGAL RESOURCES, *supra* note 51, at 20-96.

71. States in which the prior appropriation doctrine prevails include Alaska, Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Washington, and Wyoming. *See DAVENPORT*, *supra* note 45, at 6-7 n.5.

72. *See Jones v. Adams*, 6 P. 442 (Nev. 1885).

gone from judicial discussion to codified law.<sup>73</sup> The state created administrative procedures to allow an individual to apply for a vested water right, provided the user put the water to a beneficial use.<sup>74</sup> Nevada is one of eight western states that has adopted a pure appropriation system.<sup>75</sup> A general discussion of the doctrine of prior appropriation will help the reader better understand how Nevada water law functions.

The genesis of the appropriative system occurred on the borders of Nevada in the Sierra Nevada Foothills.<sup>76</sup> On January 24, 1848, James Marshall, a carpenter building Sutter's Fort,<sup>77</sup> discovered two tiny pieces of a shiny metal while he was inspecting runoff from the fort's sawmill.<sup>78</sup> To his surprise he soon realized the shiny metal was gold. This discovery sparked the gold rush that brought thousands of fortune seekers to the Sierra Foothills.<sup>79</sup>

These gold seekers trespassed on federal land that the United States had recently acquired from Mexico through the Treaty of Guadalupe Hidalgo.<sup>80</sup> A lack of any state governance forced the newcomers to adopt standards that allowed

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73. The first water legislation enacted in Nevada was promulgated in 1889, but a comprehensive body of "water law" was not created until 1913. *See* DAVENPORT, *supra* note 45, at 14. *See generally* NEV. REV. STAT. ch. 533 (1995).

74. *See* NEV. REV. STAT. § 533.030 (1995). Beneficial use is usually determined on a case-by-case basis, but the Nevada legislature has determined some uses to be a *per se* beneficial use. *See, e.g., id.* § 533.030(2).

75. Idaho, Montana, Wyoming, Utah, Colorado, Arizona, and New Mexico also have a purely appropriative system, and three other western states, Washington, Oregon, and California, have created a mixed system of water law by combining the riparian and appropriative systems. *LEGAL RESOURCES, supra* note 51, at 9.

76. Walker Lake is located on the eastern side of the Sierra Nevada Mountains. Many of the original pioneers that inhabited the areas around Walker Lake were miners seeking fortune from the Comstock Lode. *See United States v. Walker River Irrigation Dist.*, 104 F.2d 334, 339 (9th Cir. 1939).

77. Captain John Sutter, a Swiss immigrant, built his fort near present-day Sacramento after obtaining a land grant from Mexico. *See* JOHN BOESSENECKER, *GOLD DUST & GUNSMOKE* 1-12, 79 (1999).

78. *Id.* (explaining the history of the California Gold Rush).

79. By the end of 1848, the year gold was discovered in Nevada, there were 10,000 men in the gold region; only one year later the number was 40,000. *Id.* at 5.

80. The Treaty of Guadalupe Hidalgo was signed on February 2, 1848 in an attempt to avoid further hostilities between Mexico and the United States. The agreement provided that the United States pay Mexico a guaranteed sum of \$15 million for the vast California Territory, which included California, Texas, Arizona, and New Mexico. *See Treaty of Guadalupe Hidalgo*, Feb. 2, 1848, U.S.-Mex., art. XII, 9 Stat. 922.

them security for their claims.<sup>81</sup> Mining camps organized mining districts that served as a type of government, enforcing standards.<sup>82</sup> These districts required miners to post notices of their claimed lands and record them with district recorders.<sup>83</sup> Once the land was properly recorded, the districts further required the miners to work the land diligently or surrender their claim to the land.<sup>84</sup> Once a claim was recorded, the miner had priority to that land, and subsequent squatters were denied any right to occupancy.<sup>85</sup> This system, also known as "first in time, first in right," became the accepted method of land distribution.<sup>86</sup>

To conduct their mining operation on their claimed land, miners needed to divert water by digging ditches from nearby streams and rivers.<sup>87</sup> The miners adopted a system to obtain water rights that was similar to the "first in time, first in right" system used for claiming land.<sup>88</sup> Perfection of a water right required the miner to post notice at the point of diversion and dig a ditch to transport the water.<sup>89</sup> Miners maintained a right in the water provided they put the water to beneficial use.<sup>90</sup> If another party could prove the water was not being used beneficially, the miner forfeited the right to the water.<sup>91</sup>

The time of perfection is important because the holder of a properly perfected water right had seniority over any party that subsequently perfected a conflicting water right.<sup>92</sup> At a time of shortage, the rights of subsequent holders, or junior appropriators, yielded to the rights of the senior appropriators.<sup>93</sup> However, any waste or nonuse of the water by a senior

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81. ROBERT G. DUNBAR, *FORGING NEW RIGHTS IN WESTERN WATERS* 61-62 (1983).

82. *Id.*

83. *Id.*

84. If the miners were not working their land diligently, they forfeited the right to the land, and another miner could enter and stake a claim. *See id.*

85. *Id.*

86. *See id.*

87. DUNBAR, *supra* note 81, at 61-62.

88. *Id.*

89. *Id.*

90. If water was not being put to beneficial use, the appropriator is said to be wasting the water. *See* LEGAL RESOURCES, *supra* note 51, at 143-50.

91. DUNBAR, *supra* note 81, at 61-62.

92. *See id.*

93. *See id.*

appropriator would result in a forfeiture of the right and the established priority.<sup>94</sup>

Twenty-eight years after Marshall stumbled upon the shiny metal in California, Colorado became the first western state to adopt the appropriative system into its constitution.<sup>95</sup> The Colorado Supreme Court denied the existence of the riparian system, thereby making Colorado the first purely appropriative state.<sup>96</sup> Seven other states followed Colorado's approach and adopted the appropriative system.

As discussed above, Nevada is one of the states that has embraced the doctrine of prior appropriation.<sup>97</sup> The current administrative procedure requires appropriators, prior to beginning work on a water diversion, to submit an application for a water permit to the Nevada State Engineer.<sup>98</sup> The application must contain the amount of water requested, the point of diversion, the purpose for the water, and a description of the benefited land.<sup>99</sup> The engineer must approve the application unless there is insufficient water, the potential right would interfere with existing rights, or the proposed use is potentially detrimental to the public interest.<sup>100</sup> The state's authority to allocate its water gives the engineer significant discretion over the use of water in the state, but once the water right has been approved, it restrains the state's ability to revisit the issue of whether the water diversion is conflicting with the general public interest. The next section addresses one problem created by the system of prior appropriation.

#### *D. Strengths and Shortcomings of Prior Appropriation*

Unlike the more humid eastern states that have multiple rivers in close proximity and consistent precipitation, the western states have little of either.<sup>101</sup> If a riparian water sys-

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94. *See id.*

95. COLO. CONST. art. XVI, § 6 (1876).

96. *See Coffin v. Left Hand Ditch Co.*, 6 Colo. 443 (1882). Each state has sovereignty over the waters within its borders. When the Union admitted the original thirteen colonies, they took authority over the waters within their boundaries. The states that were subsequently established received the same rights in their waters as the original thirteen colonies. This was known as the "equal footing doctrine." *See* LEGAL RESOURCES, *supra* note 51, at 462.

97. *See* NEV. REV. STAT. § 533.030 (1995).

98. *Id.* § 533.325.

99. *Id.* § 533.335.

100. *Id.* § 533.370.

101. For example, North Carolina covers 52,669 square miles of land and has

tem were implemented in the drier western states, it would not allow for the same type of population growth, and would reduce the quantity of land that would be available for development.<sup>102</sup> Prior appropriation is beneficial in the western climate because it allows the transfer of water from its source of origin to another parcel, sometimes many miles away.<sup>103</sup> Moreover, prior appropriation provides security in water rights by attaching a right to a definite quantity of divertible water,<sup>104</sup> and provides incentives for water users to put the water to use.

The system for obtaining a water right has changed since the early miners.<sup>105</sup> Each state now has its own standards for water diverters to obtain a permit from the state engineer or water board.<sup>106</sup> Once the permit is approved, holders of a water right have security in a certain amount of water.<sup>107</sup> This security is important because it allows the holder of the water right to build and develop infrastructures to use the water.<sup>108</sup> The appropriators know that their claim to water is secured from the date of the permit and is superior to the rights of

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hundreds of rivers flowing over 40,000 miles. American Rivers, <http://www.amrivers.org/hydropowertoolkit/riversofnorthcarolina.htm> (last visited Jan. 20, 2004). In contrast, Nevada covers 110,540 square miles of land with only six major rivers. State of Nevada, Dept. of Conservation and Natural Res., <http://water.nv.gov/Water%20planning/wat-fact/backtoc.htm> (last modified 1992).

102. If water is unavailable for off-stream diversion, the only parcels of land capable of receiving water are those above an aquifer and those riparian to a stream or lake. This restriction would eliminate or reduce the size of many western cities. *See generally* LEGAL RESOURCES, *supra* note 51, at 98-104.

103. In 1913, Los Angeles completed a 223-mile aqueduct that transported water from Owens Valley, on the eastern foothills of the Sierra Nevada Mountains, through the San Fernando Valley into Los Angeles. *See* MARC REISNER, *CADILLAC DESERT* 85-90 (1993).

104. DUNBAR, *supra* note 81, at 209.

105. State law controls the application and distribution of water and water rights. *See, e.g.*, COLO. CONST., art. XVI, §§ 5,6 (1876); NEV. REV. STAT. § 533 (1995).

106. Each state has full jurisdiction over the lands within its borders and may determine how to implement its water law system. *See* DUNBAR, *supra* note 81, at 77-78. States such as Nevada have a state engineer who is responsible for granting permits. Other states, such as California, have a water control board that is comprised of five members with varying backgrounds. The governor elects these members, who serve a four-year term. State Water Resources Control Board, *at* <http://www.swrcb.ca.gov/about/members/index.html> (last modified 2003).

107. *See* LEGAL RESOURCES, *supra* note 51, at 99.

108. *See id.*

later applicants, provided that they neither abandon the right nor waste the water.<sup>109</sup> If at any time there is not enough water to satisfy the need of the senior appropriator, the junior appropriators must cease use in favor of the senior appropriator.<sup>110</sup> The junior appropriator's access to water may depend on the variable amounts of precipitation from year to year, while the senior appropriator can operate with a secure right.<sup>111</sup> As Professor Frank J. Trelease observed, "[t]he rule of priority does guarantee a firm supply for all for whom the source is sufficient, and the senior irrigators can build a stable agriculture unmatched in humid states."<sup>112</sup> This situation is optimal in a drier climate because the junior appropriators constantly monitor the water system. The theory of beneficial use provides that if a senior appropriator fails to use the water in a reasonable manner or needlessly wastes the water, the junior appropriator can attempt to claim the water for himself.<sup>113</sup> Therefore, the junior appropriators have an incentive to police the senior appropriators' use of water, and ensure that the senior appropriators maintain their beneficial use. Such a situation decreases the need for judicial oversight, and encourages water users to maintain their beneficial water uses.

These beneficial traits of the appropriative system resolved many of the problems confronted by the landscape of the arid west. In all likelihood, if western states had refused to accept the doctrine originally, they probably would have created a system of allocation that closely resembled it.<sup>114</sup>

Although the appropriative system has provided the western states the benefits discussed above, it is not perfect. The doctrine allows an appropriator to maintain a water right for an enumerated quantity regardless of water conservation efforts.<sup>115</sup>

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109. *See id.* at 143-45.

110. *See* 2 WATERS AND WATER RIGHTS § 12 (Robert E. Beck ed., 1991).

111. A junior appropriator may forfeit his claim to water if the source of water is inadequate to meet the demands of the senior appropriators. *See* LEGAL RESOURCES, *supra* note 51, at 99.

112. *See* A. Dan Tarlock, *The Future of Prior Appropriation in the New West*, 41 NAT. RESOURCES J. 769, 776 (2001) (quoting Frank J. Trelease, *Climate Change and Water Law*, in CLIMATE, CLIMATE CHANGE AND WATER SUPPLY 70 (James Wallis ed., 1977)).

113. *See* LEGAL RESOURCES, *supra* note 51, at 122-28.

114. *See* Tarlock, *supra* note 112, at 776.

115. *See, e.g.*, MARC REISNER & SARAH BATES, OVERTAPPED OASIS: REFORM

Conservation is important because it effectively provides more beneficial uses of water.<sup>116</sup> However, because water was free, early diverters had no reason to develop efficient irrigation controls so long as a water source was not fully appropriated.<sup>117</sup> Why would an irrigator spend more of his or her resources developing an efficient water transportation system to prevent loss through seepage or evaporation when the irrigator could simply divert more water from the river or stream?<sup>118</sup> Inefficient uses were tolerated, in part, because the standards used to determine beneficial use were inefficient uses themselves.<sup>119</sup> Furthermore, the disincentive to conserve continued even after the water right was established.<sup>120</sup>

In some states once the water right was established, an irrigator was dissuaded from implementing further conservation methods because he or she would lose the right to the salvaged water.<sup>121</sup> The states that conformed to this notion sought to protect the junior appropriators and allow other potential appropriators to gain access to water.<sup>122</sup> In order to maintain a right in the salvaged water, the senior appropriator would have to obtain a new permit for that water. Assuming the water source was not fully appropriated, the right for the salvaged water would be at the bottom of the list in terms of priority.

The lack of conservation forced states to seek other methods of protection for their natural resources. One such

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OR REVOLUTION FOR WESTERN WATER 64-66 (1990).

116. See Steven J. Shupe, *Waste in Western Water Law: A Blueprint for Change*, 61 OR. L. REV. 483, 488 (1982). See generally Truckee Meadows Water Authority, at <http://www.tmh20.com/conservation> (last modified 2003).

117. See Shupe, *supra* note 116, at 486.

118. The United States Supreme Court has held that a water user is only required to take conservation measures that are financially and physically feasible. See *Colorado v. New Mexico*, 467 U.S. 310, 319 (1984); see also *Erickson v. Queen Valley Ranch Co.*, 99 Cal. Rptr. 446, 450 (Ct. App. 1971) (holding that a loss of five-sixths of the flow en route to the point of use was reasonable).

119. See WILLIAM GOLDFARB, *WATER LAW*, 35-36 (2d ed. 1989).

120. See, e.g., REISNER & BATES, *supra* note 115, at 64-66.

121. See *S.E. Colo. Water Conservancy Dist. v. Shelton Farms, Inc.*, 529 P.2d 1321 (Colo. 1974); *Salt River Valley Water Users' Ass'n v. Kavacovich*, 411 P.2d 201 (Ariz. 1966).

122. See *Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist.*, 45 P.2d 972 (Cal. 1935) (noting that since *Tulare*, California has sought to encourage conservation by enacting laws allowing conserved water to be sold); see also LEGAL RESOURCES, *supra* note 51, at 157.



method is the public trust doctrine.

*E. The Public Trust Doctrine*

Stated most simply, the public trust doctrine requires states to hold all navigable waters in trust for the public.<sup>123</sup> The original concepts of the public trust doctrine can be traced to Roman and English common law. Roman law acknowledges the communal nature of common waterways, as seen from the following excerpt: "By the law of nature these things are common to mankind—the air, running water, the sea and consequently the shores of the sea."<sup>124</sup> Years later, Britain expanded the scope of the public trust by granting ownership to the king, subject to the duty of maintaining the property for the public's use.<sup>125</sup> The public's right to use this land was inalienable, and the king was unable to divest his duty.<sup>126</sup>

The equal-footing doctrine<sup>127</sup> has passed the responsibility of protecting the public's interest in navigable waters to the states.<sup>128</sup> One of the most prominent cases regarding the public trust, *Illinois Central Railroad Co. v. Illinois*,<sup>129</sup> recognizes the state's obligation to maintain control over public lands,

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123. The public trust doctrine has been compared to the rule against perpetuities because both act to prohibit self-perpetuating conveyances—the public trust doctrine by promoting the free alienability of land. See Michael C. Blumm & Thea Schwartz, *Mono Lake and the Evolving Public Trust in Western Water*, 37 ARIZ. L. REV. 701, 703 (1995).

124. Jan S. Stevens, *The Public Trust: A Sovereign's Ancient Prerogative Becomes the People's Environmental Right*, 14 U.C. DAVIS L. REV. 195, 197 (1981) (quoting J. INST. 2.1.1.pr. (T. Cooper trans. & ed., 1841)).

125. See *id.* at 197-98.

126. See *id.*

127. The equal footing doctrine passed sovereignty of all navigable bodies of water within the particular territory to the state upon its entrance to the Union. See DAVENPORT, *supra* note 45, at 43.

128. Justice Holmes commented on the public's interest in its waters.

[F]ew public interests are more obvious, indisputable and independent of particular theory than the interest of the public of a State to maintain rivers that are wholly within it substantially undiminished, except by such drafts upon them as the guardian of the public welfare may permit for the purpose of turning them to a more perfect use. This public interest is omnipresent wherever there is a State, and grows more pressing as population grows. It is fundamental, and we are of opinion that the private property of riparian proprietors cannot be supposed to have deeper roots.

*Hudson County Water Co. v. McCarter*, 209 U.S. 349, 356 (1908); see also *Polard's Lessee v. Hagen*, 44 U.S. 212 (1845).

129. 146 U.S. 387 (1892).

and not to divest its authority by encumbering the land in favor of a private party.<sup>130</sup> In this case, the Illinois legislature granted a substantial portion of submerged land in Lake Michigan to the Illinois Central Railroad.<sup>131</sup> The court held that this divestiture encumbered land in which title was held in trust for the people of the state so that the people could use the waters to navigate, recreate,<sup>132</sup> and engage in commerce.<sup>133</sup> This case, along with others, provided a backdrop from which the public trust doctrine developed.<sup>134</sup>

The scope of the public trust doctrine depends on the classification of waters as navigable.<sup>135</sup> Clearly, the waters of Lake Michigan are considered navigable;<sup>136</sup> however, the distinction for smaller bodies of water is not always clear.<sup>137</sup> Typically the federal standard of navigability is used to determine whether a waterway is capable of navigation.<sup>138</sup> However, states are not prevented from promulgating their own standards of navigability, provided they do not circum-

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130. *Id.* at 461-64.

131. The grant included more than just the submerged lands. The legislature also included one mile of shoreline along the central business district of Chicago—more than one thousand acres in sum. This land constituted almost the entire commercial waterfront of the city. See Joseph Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 473, 489 (1970).

132. The terms navigate and recreate “have been held to include the right to fish, hunt, bathe, swim, to use for boating and general recreation purposes the navigable waters of the state, and to use the bottom of the navigable waters for anchoring, standing, or other purposes.” See *Nat’l Audubon Soc’y v. Superior Court*, 658 P.2d 709, 719 (Cal. 1983) (quoting *Marks v. Whitney*, 491 P.2d 374, 380 (Cal. 1971)).

133. *Illinois Central*, 146 U.S. at 452.

134. *Illinois Central* and other cases dealing with the application of the public trust doctrine to the states, such as *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469 (1988), show that the public trust is a federal requirement, and states are not free to rescind requirements of federal law absent federal consent. See Michael C. Blumm et al., 24 *Renouncing the Public Trust Doctrine: An Assessment of the Validity of Idaho House Bill*, ECOLOGY L.Q. 461, 491 (1997).

135. Although the trust obligation of states now extends to non-navigable waters, see *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469 (1988), states are required to allow the public use and access to navigable waters. See Stevens, *supra* note 124, at 200-03.

136. See *Illinois Central*, 146 U.S. at 436-37.

137. Although it is clearly navigable, it has been argued that the public trust applies only to waters “in which the tide ebbed and flowed.” See Stevens, *supra* note 124, at 202. This argument was rejected by the Supreme Court in *Propeller Genesee Chief v. Fitzhugh*, 53 U.S. 443 (1851).

138. See *Illinois Central*, 146 U.S. at 435-37.

vent the federal test.<sup>139</sup>

The federal test for navigability, better known as the Daniel Ball test,<sup>140</sup> is as follows:

Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water.<sup>141</sup>

Although this test was originally designed for lakes and rivers capable of foreign commerce, the Supreme Court has applied it to all watercourses.<sup>142</sup> State laws have increased the scope of the public trust by expanding the definition of navigability based on the waterway's ability to support recreation.<sup>143</sup> Some states have even included non-navigable tributaries supporting a navigable lake under the public trust's protection.<sup>144</sup>

This broadened scope of the public trust has incensed many landowners whose use of water was regulated, because they feel that the revocation of their water right constitutes a taking which requires compensation under the Takings Clause of the Fifth Amendment.<sup>145</sup> The argument that government action under the public trust doctrine constitutes a taking for which compensation must be provided collides with

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139. See Blumm & Schwartz, *supra* note 123, at 713-15. Most states have chosen to supplement the federal standard. See *Arkansas v. McIlroy*, 595 S.W.2d 659 (Ark. 1980) (holding that water capable of being used for recreation for a substantial portion of the year is navigable); *Brown v. Newport Concrete Co.*, 336 N.E.2d 453, 457 (Ohio 1975) (holding recreational use as well as commercial use must be considered as factors in determining navigability); *Attorney General v. Woods*, 108 Mass. 436, 440 (1870) (holding that if water is capable of pleasure boating it must be regarded as navigable); *MacMullen v. Hallden*, 214 N.W.2d 856, 864 (Mich. 1974) (holding that navigable waters include any which are capable of being navigated by oar or motor propelled small craft).

140. The test's name originated from the case in which it was enunciated. See *The Daniel Ball*, 77 U.S. 557 (1870).

141. See *id.* at 563.

142. See *United States v. Oregon*, 295 U.S. 1, 14 (1935).

143. See *supra* note 139.

144. See *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709, 719-21 (Cal. 1983).

145. See generally Jack H. Archer & Terrance W. Stone, *The Interaction of the Public Trust and the "Takings" Doctrines: Protecting Wetlands and Critical Coastal Areas*, 20 VT. L. REV. 81 (1995).

the very principle of the public trust—i.e. the state cannot divest its trust obligation to a private party.<sup>146</sup> Viewed under the public trust theory, any state grant of a water right would not be a transfer of title for the water; it would merely be a right of use, subject to rescission if the state determined that the use infringed upon the public's right.<sup>147</sup> Since the Takings Clause only protects the taking of private property, it has proven to be an ineffective tool to combat the public trust doctrine.<sup>148</sup>

California was the first western state to incorporate the public trust doctrine, and has allowed the broadest interpretation of the doctrine.<sup>149</sup> California remains one of the few states to actually reclaim a vested water right in order to protect the public's environmental interest in a navigable waterway.<sup>150</sup> Accordingly, this comment will now examine California's interpretation of the public trust, and then apply that interpretation to the Walker Lake litigation.

### III. IDENTIFICATION OF NEVADA'S PROBLEM

The system of prior appropriation has proven to be an effective method for water distribution in the western states.<sup>151</sup> States have the authority to provide water to their citizens, and the citizens are encouraged to use this valuable natural resource in a beneficial manner.<sup>152</sup> Unfortunately, states occasionally grant rights to water that in the long-term can have detrimental impacts on waterways and the ecosystems they support.<sup>153</sup> The system of prior appropriation does not

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146. See, e.g., *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387 (1892).

147. See Hope M. Babcock, *Has the U.S. Supreme Court Finally Drained the Swamp of Takings Jurisprudence?: The Impact of Lucas v. South Carolina Coastal Council on Wetlands and Coastal Barrier Beaches*, 19 HARV. ENVTL. L. REV. 1, 55-56 (1995). In other words, trust property is encumbered with an implied servitude restricting uses consistent with trust purposes. See Michael C. Blumm, *Public Property and the Democratization of Western Water Law: A Modern View of the Public Trust Doctrine*, 19 ENVTL. L. 573, 584-87 (1989).

148. Prior to 1995 only one court had ruled that the government's action under the public trust doctrine constituted a taking. See Babcock, *supra* note 147, at 56.

149. See *Marks v. Whitney*, 6 Cal. 3d 251 (1971).

150. See LEGAL RESOURCES, *supra* note 51, at 552.

151. See, e.g., REISNER & BATES, *supra* note 115, at 60-61.

152. *Id.*

153. Many western rivers are overappropriated as a result of states granting more water rights than each river or stream can support in a given year. See *id.* at 64-65.

contain a remedy to prevent environmental degradation.<sup>154</sup>

Similarly, some states have sought to protect the environment by implementing the public trust doctrine.<sup>155</sup> Although Walker Lake is a waterway in need of protection, the public trust doctrine has not been used to protect the Walker Lake ecosystem because Nevada courts have yet to define the scope of the public trust doctrine in Nevada water law.<sup>156</sup> This comment examines whether the public trust doctrine would protect Walker Lake, assuming the Nevada Supreme Court would adopt the same scope as California in *National Audubon*.

## V. ANALYSIS

### A. *The Public Trust in California*

Because California was the first state to expand the scope of the public trust for the maintenance of navigable bodies of water for ecological and recreational interests of the public, it makes for a good starting point for analysis in the Walker Lake situation. California's water law does not mirror Nevada's pure appropriation system. California is one of the few states that has embraced a hybrid of both the riparian and the prior appropriation systems.<sup>157</sup> However, since the public trust doctrine in California has been applied to appropriative water rights, the analysis will be the same for Walker Lake using Nevada's system of prior appropriation.<sup>158</sup>

California first attempted to reconcile the doctrine of prior appropriation and the public trust doctrine in *National Audubon*.<sup>159</sup> In 1940, the California State Water Board awarded the city of Los Angeles water rights to divert nearly

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154. *Id.*

155. *See, e.g., Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709, 718-27 (Cal. 1983).

156. *See Mineral County v. State, Dep't of Conservation and Natural Res.*, 20 P.3d 800, 804 (Nev. 2001).

157. LEGAL RESOURCES, *supra* note 51, at 9.

158. The outcome of a dispute between two claims of a water right would be resolved differently under Nevada's purely appropriative system and California's mixed riparian and appropriative system. However, our inquiry is based solely on the termination of a party's right with regard to government action. The outcome of this inquiry would be the same whether the claimant received his or her right through riparian rights or the appropriative doctrine.

159. *See Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal. 1983).

the entire flow of four of the five tributary streams supplying Mono Lake with water.<sup>160</sup> Prior to granting the rights to the city, the Water Board heard arguments from various interested parties on the potential commercial, recreational, and scenic damage the diversion would cause.<sup>161</sup> The Board acknowledged the potential harms that could result, but felt it lacked authority to deny the application.<sup>162</sup>

A year after obtaining the proper permits, the city completed an aqueduct to carry the water from the four tributaries to Owens River,<sup>163</sup> where the water was then transported by aqueduct to Los Angeles.<sup>164</sup> In June 1970, the city completed another phase of construction that allowed for another aqueduct to collect nearly twice as much water from the tributaries.<sup>165</sup> From 1970 to 1980, the city diverted an average of 99,580 acre-feet of water per year from the Mono Lake basin.<sup>166</sup>

As a result of these diversions, many ecological problems arose that became the subject of the *National Audubon* litigation.<sup>167</sup> One such problem was the land bridge that formed between the shore and one of two islands on Mono Lake.<sup>168</sup> The diminished water level allowed coyotes and other predators

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160. Los Angeles sought to divert the entire flow from Lee Vining Creek, Walker Creek, Parker Creek, and Rush Creek. See Andrew H. Sawyer, *Changing Landscapes and Evolving Law: Lessons from Mono Lake on Taking and the Public Trust*, 50 OKLA. L. REV. 311, 312 (1997). Mono Lake is situated on the eastern slopes of the Sierra Nevada Mountains about 140 miles south of Reno and 300 miles north of Los Angeles.

161. *National Audubon*, 658 P.2d at 713.

162. A 1921 amendment to the Water Commission Act of 1913, which declared that use of water for domestic purposes was the highest use of water, guided the Board's decision. Since Los Angeles' proposed use was for its municipal water supply, the Board determined that it was entitled to the highest priority and granted the permit. *Id.*

163. The Owens River Aqueduct was the subject of the infamous water wars between the city of Los Angeles and the farmers of Owens Valley. For an in-depth discussion, see REISNER, *supra* note 103, at 51-103.

164. *Id.*

165. From 1940 to 1970 the city was diverting an average of 57,067 acre-feet of water per year. The result was a drop in lake level of 1.1 feet per year. See *National Audubon*, 658 P.2d at 714.

166. See *id.*

167. Other problems included (1) a rise in salinity levels, which affected other bird populations as well as shrimp living in the lake; (2) exposure of alkali that become airborne and irritate the mucous membranes and respiratory systems of humans and other animals; and (3) diminished economic, recreational, and scenic resources. See *id.* at 715-16.

168. *Id.*

access to the island.<sup>169</sup> This island was a spawning ground for the California gull, and provided a nesting ground for twenty-five percent of the entire species.<sup>170</sup> The plaintiffs argued that the diversions would eventually cause irreparable damage to the lake and its ecosystem<sup>171</sup> and that the public trust required state intervention.

The court held that the public's interest in maintaining the ecological integrity of Mono Lake outweighed Los Angeles' desire to divert the water, and in doing so expanded the common law scope of the public trust doctrine in three important ways.<sup>172</sup>

First, the court found that even though the four tributaries of Mono Lake were not navigable, the public trust extended to non-navigable tributaries that flowed into a navigable lake.<sup>173</sup> The court reasoned that the purpose of the public trust doctrine was to protect the public interest in maintaining a navigable waterway. The damage to the navigation of the waterway is the same whether the conduct affects the waterway directly, or through a tributary that recharges the waterway.<sup>174</sup> Without extending the scope of the public trust to include such tributaries, the public trust would not protect Mono Lake effectively.

Second, the court read the role of the public trust to protect not only public access to navigable waterways, but also ecological and recreational interests in the waterways.<sup>175</sup> Traditionally the public trust was used to ensure public access to tidelands for navigation, commerce, and commercial fishing.<sup>176</sup> The common law did not include use of the public trust for ecological or scenic benefits. The court held that "[t]here is a growing public recognition that one of the most important public uses . . . is the preservation of . . . lands . . . as open space, and as environments which provide food and

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169. *See id.* at 716.

170. In 1981, ninety-five percent of the hatched chicks did not survive to maturity. *Id.*

171. Plaintiffs argued that the increase in salinity could affect not only the shrimp in the lake, but also the birds that feed on the shrimp. Further, they speculated that the drastic decrease in water could destabilize the system, causing the lake to dry up. *See National Audubon*, 658 P.2d at 715-16.

172. *See id.* at 719-23.

173. *See id.* at 719-21.

174. *Id.*

175. *Id.*

176. *See Sax, supra* note 131, at 475.

habitat for birds and marine life, and which favorably affect the scenery and climate of the area."<sup>177</sup> Thus, the public trust allows the state to consider damage to ecological and scenic preservation.

Finally, when examining the nature of the water diversions, the state must do more than consider the impacts the diversions would have on the trust resources. A substantive burden falls upon the state affirmatively to protect trust resources when the state examines the water rights.<sup>178</sup> In examining the water rights, the state must consider these important factors: the need for exported water, reliance on water rights, the financial cost of replacement water, and environmental costs associated with replacement supply.<sup>179</sup> Assuming these considerations do not outweigh the public's interest, the state must reacquire the water as trustee. However, the public trust does not always prevent the state from allowing appropriations that are detrimental to the public interest: "As a matter of practical necessity the state may have to approve appropriations despite foreseeable harm to the public trust uses."<sup>180</sup>

Since *National Audubon*, six states have incorporated the public trust doctrine,<sup>181</sup> two states have allowed for public access to navigable and non-navigable waters,<sup>182</sup> and another has extended public trust obligations to submerged lands, which could be extended to include the waters above them.<sup>183</sup> Nevada remains the only western state which has not addressed the public trust doctrine.<sup>184</sup>

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177. *Id.* at 719.

178. *Id.* at 723.

179. *National Audubon*, 658 P.2d at 729.

180. *Id.* at 728.

181. See *Owsichuk v. Ala. Guide Licensing & Control Bd.*, 763 P.2d 488 (Alaska 1988); *Caminiti v. Boyle*, 732 P.2d 989 (Wash. 1987); *Dep't of State Lands v. Pettibone*, 702 P.2d 948 (Mont. 1985); *Kootenai Evntl. Alliance v. Panhandle Yacht Club*, 671 P.2d 1085 (Idaho 1983); *United Plainsmen Ass'n v. N.D. Water Conservation Comm'n*, 247 N.W.2d 457 (N.D. 1976); *Bowlby v. Shively*, 22 Or. 410 (1892).

182. See *Day v. Armstrong*, 362 P.2d 137 (Wyo. 1961).

183. See *Ariz. Ctr. for Law in the Pub. Interest v. Hassell*, 837 P.2d 158 (Ariz. Ct. App. 1991); *Colman v. Utah State & Land Bd.*, 795 P.2d 622 (Utah 1990).

184. See 6 WATERS AND WATER RIGHTS § 501 (Robert E. Beck et al., eds., 1991).



*B. Public Trust in Nevada Law*

Unlike California, Nevada has little precedent to guide the court in determining the scope of the public trust doctrine.<sup>185</sup> However, there is little doubt that the public trust exists in Nevada law.<sup>186</sup> Both legislative statutes<sup>187</sup> and Nevada case law<sup>188</sup> suggest that the water contained within the state belongs to the public, and a private individual may only obtain a usufructuary right to the water.<sup>189</sup> Accordingly, the state as trustee would have a duty to maintain the trust res for the public.<sup>190</sup> However, the use of the public trust doctrine in Nevada law would be limited because few waterways would meet the test for navigability.<sup>191</sup>

Common law public trust only allows for the use of the public trust doctrine for navigable bodies of water.<sup>192</sup> In *State v. Bunkowski*, the Nevada Supreme Court held that the test for navigability in Nevada was the federal "used for commerce" test.<sup>193</sup> The court stated that in order to be considered navigable, a waterway must be capable, in its natural and ordinary condition, of supporting commerce,<sup>194</sup> and "the watercourse must be geographically situated so that it may be use-

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185. Prior to *National Audubon*, California courts discussed the public trust doctrine and applied it mainly in cases involving coastal tidelands. See, e.g., *City of Berkeley v. Superior Court*, 606 P.2d 362 (Cal. 1980); *Marks v. Whitney*, 491 P.2d 374 (Cal. 1971); *People v. Cal. Fish Co.*, 138 P. 79 (Cal. 1913).

186. Justice Rose in his concurring opinion stated, "the existence of the public trust doctrine in Nevada appears to be beyond debate." *Mineral County v. State, Dep't of Conservation and Natural Res.*, 20 P.3d 800, 808 (Nev. 2001).

187. All waters within the boundary of the state belong to the public. See NEV. REV. STAT. § 533.025 (1995).

188. See *Humboldt Land & Cattle Co. v. Allen*, 14 F.2d 650, 653 (D. Nev. 1926) (holding that states' regulation of water use is not a taking that requires Fifth Amendment compensation); *Bergman v. Kearney*, 241 F. 884 (D. Nev. 1917).

189. See *Application of Filippini*, 202 P.2d 535 (Nev. 1949).

190. *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 436-37 (1892).

191. The Nevada Department of Water Resources only lists six major rivers in the state, and one of them is the Walker River which is not considered navigable. <http://water.nv.gov/Water%20planning/wat-fact/rivintro.htm>.

192. Nevada statutes declare the Colorado River, the Virgin River, and Winnemucca Lake to be navigable. See Nev. Rev. Stat. §§ 537.010, 537.020, 537.030 (2003). However, the listings in these sections are not determinative of navigability; a court may establish a navigable body of water. See *State v. Bunkowski*, 503 P.2d 1231, 1238 (Nev. 1972) (holding Carson River to be navigable under the federal test).

193. *Bunkowski*, 503 P.2d at 1233.

194. *Id.* at 1234.

ful for commerce.”<sup>195</sup> Applying this test, the court found the Carson River navigable because loggers once used the river to float logs downstream, even though significant impediments prevented the logs from traveling the waterway without difficulty.<sup>196</sup> Although the court ruling established a liberal application of the federal test, it is unlikely that most other waterways in Nevada would qualify under the test because the Carson River is one of the larger rivers in the state. As a result, few streams and rivers within the state would be subject to protection through the public trust doctrine because the doctrine requires navigability. Even if the Nevada Supreme Court were to construe the scope of the public trust to include non-navigable tributaries that feed into navigable waterways, similar to the scope applied in *National Audubon*, the lack of navigable lakes in Nevada would only provide for limited application of the public trust doctrine.

### C. *Public Trust Applied to Walker Lake*

#### a. *Navigable Waterway*

Because the diversions that cause the damage to Walker Lake occur upstream on the Walker River, a court would first need to determine whether the Walker River is navigable. Although the issue of whether the Walker River is navigable has not undergone judicial analysis using the test from *Bunkowski*, one court, in dictum, stated that the river was not navigable.<sup>197</sup> Assuming that the Walker River would not meet the federal test for navigability, the public trust doctrine would not apply to the diversions on the river. In order for the public trust doctrine to apply to the Walker River, the Nevada Supreme Court would have to expand the scope of the public trust doctrine to include non-navigable tributaries that feed a navigable lake.<sup>198</sup> There is at least some suggestion that the Nevada Supreme Court would expand the scope of the public trust as Justice Rose cited *National Audubon* for the proposition that the public trust included these tributary-

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195. *Id.* at 1236.

196. *Id.* at 1234-36.

197. *United States v. Walker River Irrigation Dist.*, 11 F. Supp 158, 160 (1935), *overruled by* *United States v. Walker River Irrigation Dist.*, 104 F.2d 334 (9th Cir. 1939).

198. *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709, 719-21 (Cal. 1983).

ies.<sup>199</sup> Therefore, the state would have a duty to oversee the trust resources to ensure that the diversions were not detrimental to the public interest in the lake.

*b. Continuous Duty to Oversee Trust Resources*

Assuming that the Walker River was considered navigable, the State Engineer would have the duty of determining whether a proposed use threatens the public interest according to the public trust doctrine.<sup>200</sup> Current Nevada law requires the State Engineer to determine the public interest prior to granting a permit to appropriate water, but the law does not allow the Engineer to inquire into the public interest after the permit has been granted.<sup>201</sup> Regardless, because the water rights on the Walker River were established by federal decree, the state had not inquired into the detriment the diversions would have on the public interest. As a result, the state has an even greater responsibility to examine how the water diversions affect the public interest.<sup>202</sup> An examination of the relevant factors, such as the need for exported water, reliance on water rights, the financial cost of replacement water, and environmental costs associated with replacement supply, would reveal that the doctrine would not allow Nevada to reclaim the vested water rights.<sup>203</sup>

An important distinction between the Mono Lake case and the present Walker Lake situation are the financial and geological resources of the parties involved.<sup>204</sup> In *National Audubon*, when the state weighed the factors stated above, the Water Resources Control Board found the city of Los Angeles could not meet the burden of proving that its diversions outweighed the damage to the public's interest.

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199. *Mineral County v. State*, Dep't of Conservation and Natural Res., 20 P.3d 800, 808 (Nev. 2001).

200. *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 436-37 (1892).

201. *See* NEV. REV. STAT. § 533.370(4) (1995).

202. "The case for reconsidering a particular decision [by the state], however, is even stronger when that decision failed to weigh and consider public trust uses." *National Audubon*, 658 P.2d at 728.

203. *Id.*

204. In 1980, the population of Los Angeles County, California was 7,477,503. <http://www.census.gov/population/cencounts/ca190090.txt> (last visited Jan. 23, 2004). As of 2001, the population of both Mineral and Lyon counties in Nevada is only 41,669. <http://www.census.gov/population/cencounts/nv190090.txt> (last visited Jan. 23, 2004).

The benefits to Los Angeles did not outweigh the burden to Mono Lake because Los Angeles could obtain water elsewhere. By 1983, Los Angeles had constructed the Los Angeles Aqueduct,<sup>205</sup> the Colorado River Aqueduct,<sup>206</sup> and the State Water Project.<sup>207</sup> Moreover, with a large population and tax base, the city of Los Angeles had the money and political influence to obtain the water necessary to serve its growing population.<sup>208</sup>

Unlike the city of Los Angeles, the irrigators diverting and storing Walker River water do not have other sources of water. Carson River, the closest river,<sup>209</sup> is already fully appropriated,<sup>210</sup> and the cost of an inter-basin transfer is not a feasible option for the farmers.<sup>211</sup> The only other source of water would be the groundwater within the basin, but since the groundwater and above ground water systems are connected, the extraction of groundwater would have a similar effect on Walker Lake.<sup>212</sup>

Since there is no alternative source of water, and these irrigators have developed and maintained their livelihood in reliance on the water they received from the state,<sup>213</sup> the bal-

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205. The Los Angeles aqueduct was completed in 1913. *See* REISNER, *supra* note 103, at 84.

206. The Colorado River Aqueduct was completed in 1941, and a second battery of pumps was built in 1952. *See id.* at 260.

207. The State Water Project was completed in 1973. *See id.* at 369.

208. For example, "[i]n 1989 the state legislature passed AB 444, stabling a \$60 million fund of investment capital to help Los Angeles build water reclamation and conservation facilities." In 1992, the federal government authorized a contribution to develop a project to reclaim 120,000 acre-feet per year. <http://www.monolake.org/socalwater/altwater.htm> (last updated Jan. 4, 2004).

209. The Carson River is located in the watershed directly north of the Walker River basin, and at one point the two rivers are only separated by about ten miles.

210. The rights to water on the Carson River are established through congressional apportionment. For a discussion on the Truckee Carson Settlement Act, see E. Leif Reid, *Ripples from the Truckee: The Case for Congressional Apportionment of Disputed Interstate Water Rights*, 14 STAN. ENVTL. L.J. 145 (1995).

211. An inter-basin transfer would require the irrigators to purchase vested water rights from a party willing to sell and then build pipeline or other aqueduct sufficient to deliver the water to the irrigators. These transfers require significant legal attention and can be very costly. *See* LEGAL RESOURCES, *supra* note 51, at 223-55.

212. In 1995, groundwater inflows to Walker Lake were estimated to be approximately 11,000 acre-feet per year. *See* Randy Pahl, WATER FOR WALKER LAKE, Nevada Division of Water Planning (Nov. 1999).

213. Most of the appropriators received a vested right to the water in 1936

ance of the public interest and the necessity for the appropriations would not allow the state to reclaim the rights to the water based on the public trust doctrine.

The preceding analysis concluding that public trust doctrine would not function to protect Walker Lake did not weigh the potentially detrimental environmental and ecological harm that could occur if the lake level continues to decline. Undoubtedly these environmental concerns would influence Nevada's decision; however, the weight given to this harm must be balanced in light of other less intrusive methods of protecting the environment, and other federal remedies, such as the Endangered Species Act. The next section will address some of these other potential remedies.

## V. PROPOSAL

Although there are potential federal remedies that could be used to argue that the appropriations on the Walker River must be terminated, this comment only focuses on the potential state remedies.<sup>214</sup> One option for the state is to condemn the lands and pay compensation to the appropriators for the water rights. Nevada law recognizes that appurtenant water rights are a separate stick in the bundle of rights attendant to real property, and thus can be separated and condemned.<sup>215</sup> Condemnation has allowed states to acquire water rights of previously appropriated water,<sup>216</sup> but the viability of this option is questionable because of the cost to condemn all the water necessary to provide adequate flow to Walker Lake. As some courts have recognized, a water right "is among the most valuable right known to the law."<sup>217</sup> As such, the amount of compensation required for the condemnation of the water rights would likely be too much for the state to afford.

Another option that has seen some success in other states

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when decree C-125 was issued. *See* United States v. Walker River Irrigation Dist., 11 F. Supp 158, 160 (D. Nev. 1935), *overruled by* United States v. Walker River Irrigation Dist., 104 F.2d 334 (9th Cir. 1939).

214. The federal government has remedies that could possibly serve to protect Walker Lake, such as the Endangered Species Act (ESA) and the Clean Water Act. For a discussion on the ESA, see Dan Tarlock, *The Endangered Species Act and Western Water Rights*, 20 LAND & WATER L. REV. 1 (1985).

215. *Dermody v. City of Reno*, 931 P.2d 1354, 1358 (Nev. 1997).

216. *See id.*; *Carson City v. Lompa's Estate*, 501 P.2d 662 (Nev. 1972).

217. *White v. Farmers' Highline Canal & Reservoir Co.*, 43 P. 1028, 1030 (Colo. 1896).

is to allow for private groups to purchase water rights for in-stream uses.<sup>218</sup> For example, a group of Oregon citizens created the Oregon Water Trust.<sup>219</sup> Under this trust, citizens have successfully purchased water rights used to preserve in-stream flows.<sup>220</sup> This method would be the most equitable of all and would result in good policy because it creates a water market between willing participants while conforming to the law under the appropriative doctrine.<sup>221</sup> On the other hand, the Oregon Water Trust has had only a limited effect in saving waterways due to the high prices involved.<sup>222</sup> Moreover, the success of the trust depends on the benevolence of affluent individuals. It remains uncertain whether there is enough public interest from individuals with the necessary resources to purchase water for Walker Lake.

## VI. CONCLUSION

Walker Lake has and continues to be a popular recreational area, and the Walker River is responsible for transforming the arid desert land into a profitable agricultural environment. Unfortunately, the use of water that once provided farmers and ranchers the opportunity to make a life for themselves is threatening a unique and valuable fishery, and the public's ability to recreate. Nevada's water law has provided security and mobility in vested water rights since its inception, but the system of prior appropriation does not itself contain a solution for the present problem. States have turned to the public trust doctrine to resolve conflicts similar to that of Walker Lake. Although the public trust as devel-

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218. In-stream use is considered a beneficial use in Nevada. *See* NEV. REV. STAT. § 533.035 (1995); *State Bd. of Agric. v. Morros*, 766 P.2d 263 (Nev. 1988). Classifying in-stream uses as a beneficial use is important because it prevents junior appropriators from claiming that the water right must be forfeited because it is not being used.

219. The group initiating the trust consisted of a president of a large land management company, the manager of an irrigation district, a director of a wild fish environmental group, and an attorney. *See* Janet Newman & Cheyenne Chapman, *Wading into the Water Market: The First Five Years of the Oregon Water Trust*, 14 J. ENVTL. L. & LITIG. 135, 135 (1999).

220. *See id.* at 140-54.

221. The appropriative doctrine allows for water transfers provided it has "become impracticable to use water beneficially or economically at the place to which it is appurtenant." *See* NEV. REV. STAT. § 533.040.

222. The trust has only purchased ten water rights with an average price of \$145.60 per acre-foot. *See* Newman & Chapman, *supra* note 219, at 157.

oped in California water law allowed for California to reclaim vested water rights to save Mono Lake and its ecosystem, the public trust doctrine would not prove to be as efficacious in the situation presented by Walker Lake.

Eventually the Nevada Supreme Court will have to address the public trust doctrine and its function in Nevada water law. However, if the court chooses to implement a construction similar to California's, the application of the doctrine would be severely limited within the state of Nevada.